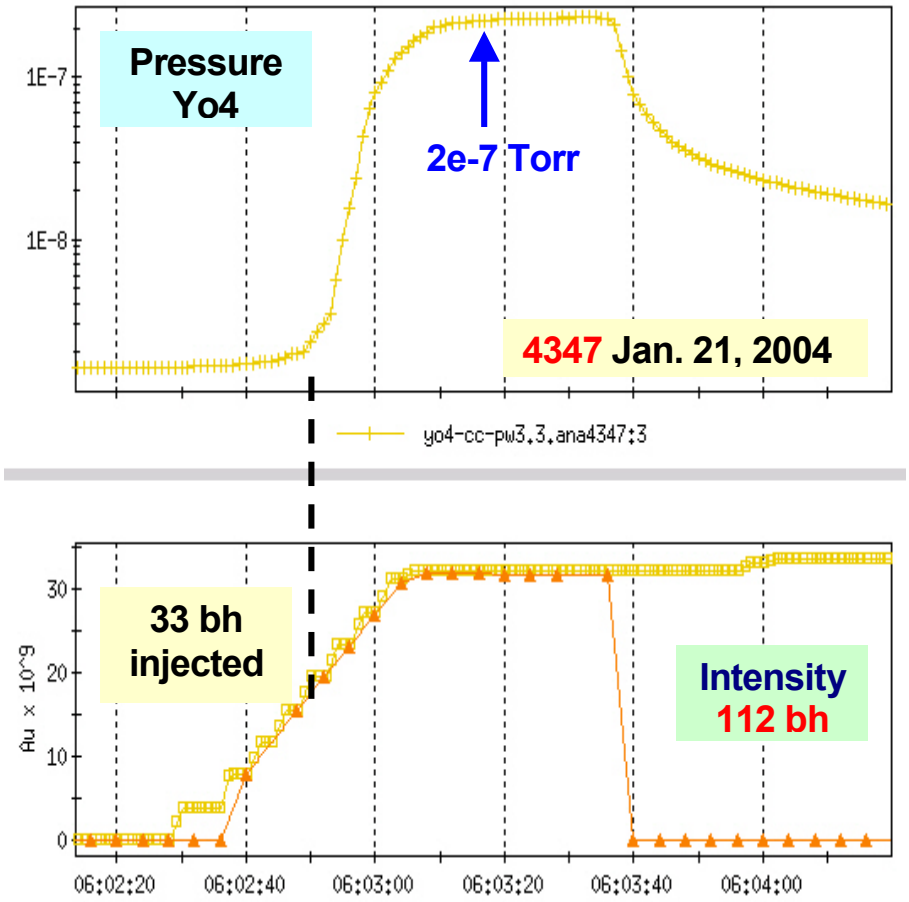
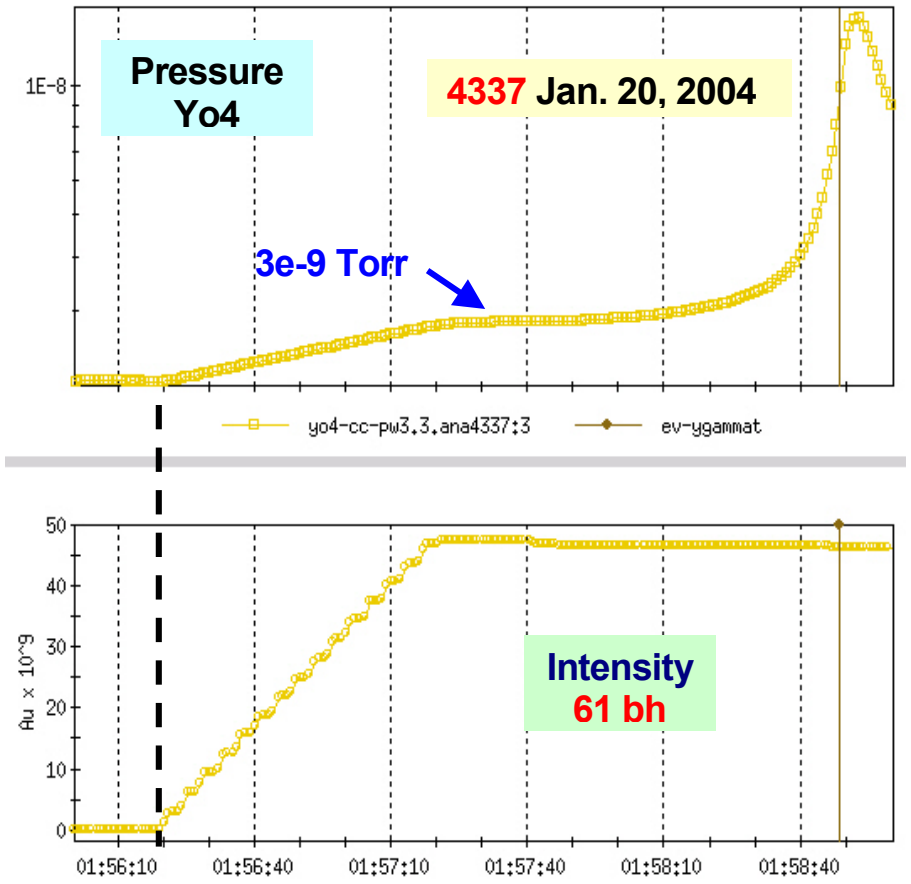
I. Yo4 pressure rise in the study: EC?

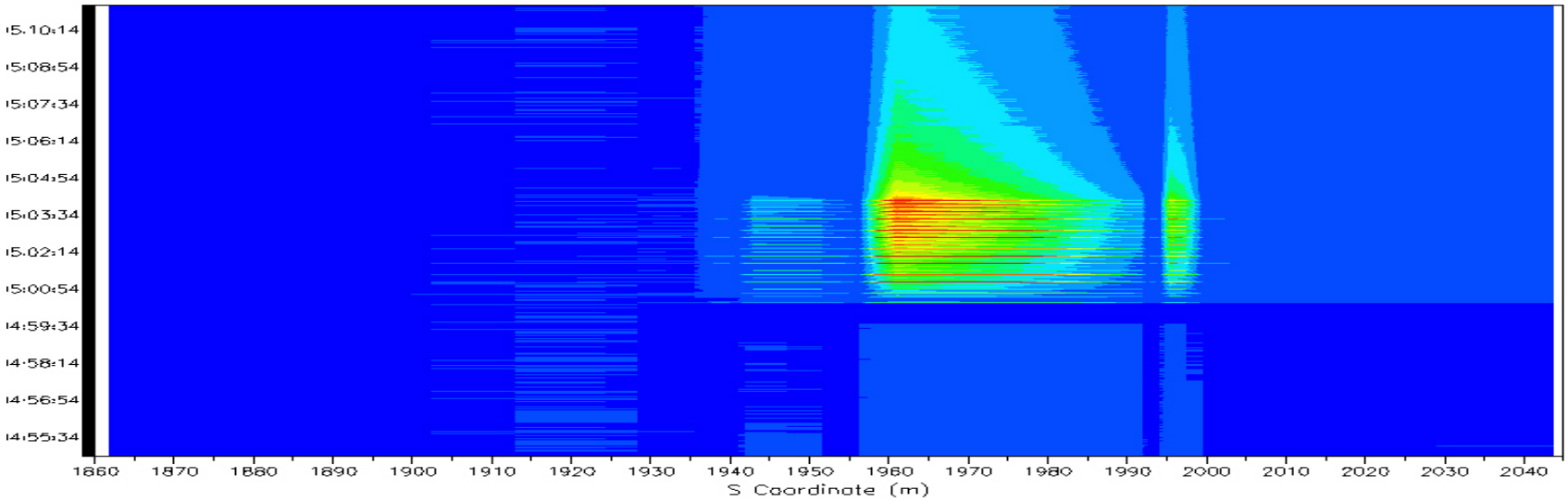
Comments on study of 1/21/04, SYZ, Jan. 23, 2004

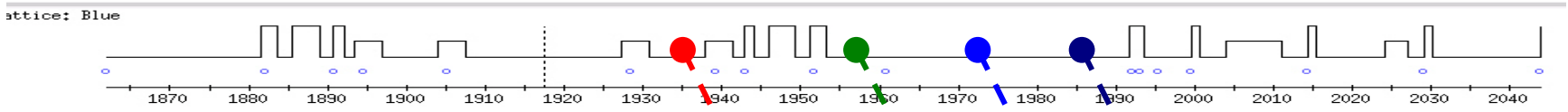




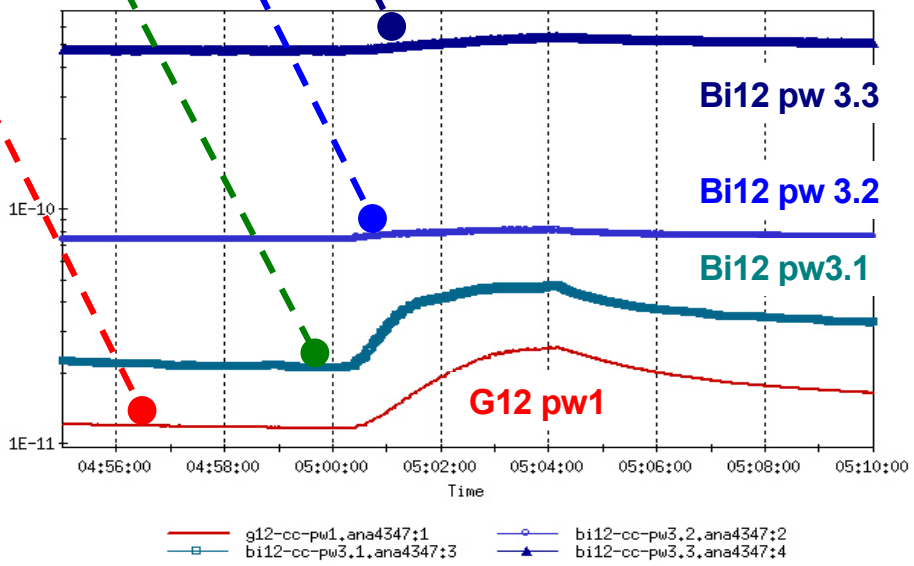
- Beam study, Jan. 7 2004, Fill 4209 showed that the pressure rise at Yo4 was not dependent on bunch spacing - same intensity of 56 bh and 112 bh incurred same pressure rise. Also zero threshold.
- Fill 4347, in beam study, Jan. 21, 112 bh, pressure rise was 2e-7 Torr for 32e9 ions, with the threshold of 17 bh injected. It looked like electron multipacting.
- Fill 4337, 1/20/04, zero threshold, 3e-9 Torr for 47e9 ions, 61 bh.
- At RF off, momentum spread decreased?

II. Scraping at Bi12 not perfect?

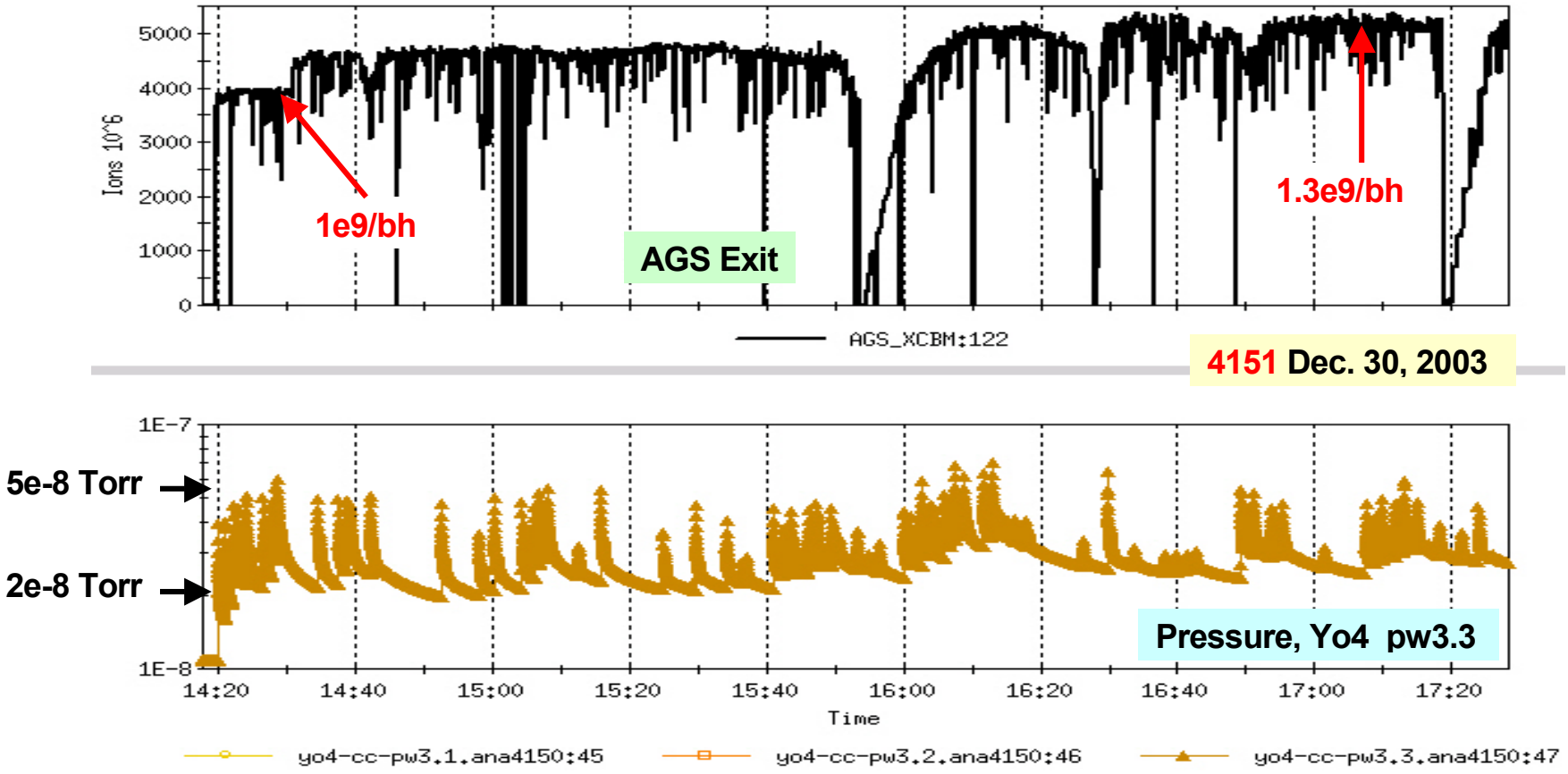




- Above 4σ, beam was cut by aperture limit at D0 and Q3. More losses should be at these locations.
- Loss monitor at Bi12 is much more sensitive.
- Assuming most losses at Bi12, then very low desorption rate implied.
- What caused the pressure rise at G12 pw1? Halo or tail? How large is the desorption rate there?



III. Pressure rise was larger than that in valve close study



- Dec. 30, 2003. Stochatic cooling kicker was left in, 15 mm.
- Single bunch injection, intensity 0.8e9 to 1e9 per bunch, survived 2 to 3 turns (Haixin).
- Pressure rise at Yo4, pw 3.3 at 3e-8 to 5e-8 Torr. No pressure rise at pw 3.1 and pw 3.2.
- Assuming 2m long chamber, the desorption rate is 3e3 to 4e3 per lost Au ion.